

THE DIPTERA OF THE TERRITORY OF NEW GUINEA. III.

FAMILIES MUSCIDAE AND TACHINIDAE.

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(One Text-figure.)

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I have recently received from Mr. F. H. Taylor a large number of specimens of various families of Diptera from New Britain but have been unable to make a complete examination of them owing to press of other work. Below I describe a new genus closely related to *Stilbomyia* Macquart, a member of a rather anomalous group which has many characters of both Tachinidae and Calliphoridae, but which appears to me best placed in the former. Possibly information on the immature stages and the larval habits in particular will afford evidence that will more definitely establish its family position. '*Musca*' *opulenta* Walker, from Australia, is also placed in the above new genus.

The types of the new species described in this paper will be deposited in the Collection of the School of Public Health and Tropical Medicine, University of Sydney.

STILBOMYELLA, n. gen.

This genus is erected to receive several species from Northern Australia and some of the islands to the north of that region. I have previously included some of them in *Stilbomyia*, but now have decided that generic separation is proper. The characters that I make use of in thus separating these species from the old concept are to be found in the more evenly rounded postscutellum, the narrower frons in both sexes, in the male about one-fifth of the head-width and without proclinate supraorbitals, though the latter are present in the females, and the lesser extent of the basal section of the third vein that is setulose. In this last character the genus is similar to *Neoamenia*, but the latter has the facial carina deeply sulcate, and the male has distinct, though not very strong, proclinate supraorbital bristles.

Genotype, *Stilbomyella nitens*, n. sp.

Key to the Species.

1. Mesopleura with a rather conspicuous silvery-white-dusted central spot, sternopleura not at all noticeably white-dusted; abdomen brilliant metallic blue-green, the sutures a little darker *opulenta* (Walker)
Mesopleura either entirely without white dusting, or very slightly dusted and not as distinctly so as the sternopleura 2
2. Facial grooves fuscous; genal hairs dark; sternopleura quite conspicuously silvery-white-dusted, mesopleura very faintly and evenly white-dusted; abdomen entirely brilliant metallic green *nitens*, n. sp.
Facial grooves not infuscated; genal hairs golden-yellow; pleura without white dust; abdomen brilliant metallic green, violet-blue on basal visible tergite and at sutures on dorsum, both the extreme apices and extreme bases dark coloured *dubia*, n. sp.

It may facilitate the recognition of the group to note here that all are very brilliant metallic green to blue-green in colour, with the head golden-yellow except the interfrontalia, which is brownish-black, the similarly coloured antennae and palpi, and the dark upper half of the occiput, which latter is densely covered with golden-yellow dust. None of the species have white-dust spots on the mesonotum or on the abdomen, and all before me have the apex of the lower squama broadly darkened.

STILBOMYELLA OPULENTA (Walker).

Proc. Linn. Soc. Lond., iii, 104, 1858.

I have finally decided to accept the Australian species as *opulenta** instead of *costalis*. Miss D. Aubertin informs me that the type-specimen of the latter is not now in the British Museum, so that it is impossible to determine exactly what it may have been. The same authority suggests that *decreescens* Walker is a synonym of *opulenta*.

She further states that a specimen identified as *costalis* by Walker has the eyes of the male separated by the width of the third antennal segment, which is evidence that it is distinct from those now before me. This specimen is placed in the Museum collection as a synonym of *gloriosa* Walker under 'New Genus'. As it has no pollinose pleural spots, this synonymy is apparently incorrect, as Walker's description of *gloriosa* definitely states that the pectus has four white tomentose spots, from which I infer that there are two spots on each pleura.

Another Walker species that evidently belongs here, according to Miss Aubertin, is *diffusa*, which may be distinguished from all the others by the restriction of the dark cloud on the costa to the extreme base instead of the anterior half of the wing.

STILBOMYELLA NITENS, n. sp.

A brilliant emerald-green species, with the typical head colouring, and the pleura lightly white-dusted, the sternopleura more distinctly dusted than the mesopleura.

♀. Frons at vertex not more than one-sixth of the head-width, widened anteriorly, the interfrontalia uniformly wide on its entire length, at middle narrower than either orbit at same point; all four verticals strong; ocellars short and hair-like; antennae rather short, third segment not more than half as wide as parafacial and not much longer than height of gena; facial carina slightly widened from upper to lower extremity, rounded above; epistome rather noticeably angulate; setulae extending on facial ridges to about middle. Genal hairs dark brown.

Mesonotum without a trace of vittae. Dorsocentrals 3 + 4, acrostichals 2 + 2. Dust on sternopleura most evident when viewed from above, and densest below.

Legs black, femora green. Fore tarsus with second to fourth segments dilated; mid tibia with a submedian ventral bristle.

Wings greyish hyaline, costa broadly blackened, the dark colour fading off behind. Third vein with setulae on less than basal half of its basal section above. Squamae yellowish-white, apical half or more of the lower one blackened. Halteres dark brown.

* Major E. E. Austen informed me several years ago *in litt.* that "*Musca*" *opulenta* Walker was a member of the family Tachinidae and that it required a new genus for its reception.—Frank H. Taylor, 24/4/34.

Abdomen entirely emerald-green, with slight coppery tinge on dorsum near base. Second tergite with a pair of strong apical central and one or two lateral bristles, third and fourth tergites each with a complete apical transverse series.

Length, 8.5 mm.

Habitat.—N. Britain: Keravat (F. H. Taylor). Type.

STILBOMYELLA DUBIA, n. sp.

Differs from the above new species in being more blue-green, with the apices of the tergites distinctly though narrowly violet-blue, and the pleura without any dust. The yellow genal hairs, and the longer third antennal segment, with the much more extensively setulose facial ridges, are additional characters for its distinction.

♂. Head coloured as in *nitens*, the upper extremities of the orbits and some parts of the vertex showing glossy green through the yellow dust; antennae deep black, the palpi dark brown in female but in the male brownish-yellow. Frons at vertex about one-sixth of the head-width, widened anteriorly, all four verticals strong, the ocellars also strong and divergent, but slightly proclinate, the fine hairs laterad of the inner marginal bristles on the orbits fuscous. Postocular orbits with some very fine yellow hairs between the serial bristles and eyes as in the other species. Third antennal segment about as wide as parafacial, distinctly longer and broader than in *nitens*, its length equal to twice the height of the gena and greater than that of arista; genal hairs yellow; facial ridges setulose to well above the middle.

Mesonotum blue-green, with coppery reflections on centre, becoming darker blue behind, the scutellum of that colour. Armature much as in *nitens*, but the acrostichals 4 + 4.

Legs black, femora blue-green. Fore tarsus slender; mid tibia with a submedian ventral bristle.

Wings broadly infuscated on costa, the dark colour shading off behind. Third vein setulose to about midway from base to inner cross-vein. Squamae greyish-white, apical third or more of the lower one blackened.

Abdomen brilliant blue-green, basal visible tergite and extreme apex and base of each of the others violet-blue. Dorsal armature as in *nitens*, the venter with long bristles that are quite dense and become fine at apices.

♀. Similar to the male, but the frons at vertex is wider, about one-fifth of the head-width, and each orbit has two strong proclinate upper orbitals. The antennae are also much shorter and the third segment narrower, almost as in *nitens* female, not more than 1.5 times as long as the height of the gena.

The fore tarsi are dilated as in the female of *nitens*, and the abdomen has the same armature, lacking the conspicuous ventral bristling of the male.

Length, 8-9 mm.

Habitat.—N. Britain: Rabaul (F. H. Taylor). Type ♂, allotype, and 5 paratypes.

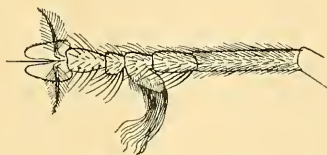
The much longer and stronger ocellar bristles in this species may be a constant character by means of which it can be distinguished from *nitens*, but I do not care to cite this as an invariable character on the basis of a single specimen of the latter. I at one time was inclined to accept the character of the fine hairs on the postocular orbits between the fringe of bristles and the eye as one that distinguished the Calliphoridae from doubtful Tachinidae, but it is somewhat variable, being sometimes present and sometimes absent in *Stilbomyia*.

PYGOPHORA HIRTIMANA, n. sp.

A species of about the same size as the genotype, with the head similarly coloured, the frons, face, antennae, and palpi, bright orange-yellow, the thorax black, with dense grey-dusting and not vittate, the legs entirely testaceous yellow, and the wings hyaline. The abdomen is testaceous yellow and without distinct marks in the type specimen, though there are slight traces of a series of reddish dorsocentral spots on the tergites except the fifth, and on the fourth traces also of a dark mark on each side.

Length, 5.5 mm.

Head of the usual form, distinctly higher than long in profile, the eyes narrowed below and about twice as high as long in profile, the parafacials linear, slightly widened above, the gena about as high as width of third antennal segment, the latter about five times as long as second segment, rounded at apex, and nearly



Text-fig. 1.—*Pygophora hirtimana*, n. sp. Left hind tarsus of male from above, specimen aligned to give exact dorsal view.

attaining the epistome, the arista long-haired on basal half, proboscis short, palpi as long as apical section of proboscis, slightly clubbed, fine-haired basally, and with some stronger bristles apically, frons at vertex hardly half as wide as at anterior margin, where it is not half as wide as its length in centre, ocellar bristles slightly longer but weaker than the upper pair of orbitals, four pairs of bristles on orbits as usual, the second and third pairs much more closely placed than the others, the anterior pair longest.

Thorax with the presutural acrostichal hairs in two or three series, scutellum with four strong bristles, the basal pair slightly the shorter, and some setulose hairs on disc, and one pair basad of the basal bristles; sternopleura with the usual three long bristles.

Legs rather stout, the hind tibia without an apical process, mid coxae each with two strong and rather long straight bristles; mid femur with three or four strong bristles on the anteroventral and posteroventral surfaces centrally, a series of shorter slightly curled bristles near apex on the posterior surface, the apices of which are slightly flexed, the mid tibia with an incision close to the base on anteroventral side, and with the ventral hairs short, black, and rather dense, especially close to the incision, hind femur and tibiae almost normal, but the latter with three unusually long bristles near apex, two of them almost dorsal and the other posterodorsal, hind tarsus as in Text-figure 1, but usually slightly curved over so that it has to be viewed from different angles to show the characters in the drawing, all tarsal claws with much longer hairs on their sides than usual.

Wings with the usual shape and venation, outer cross-vein slightly bent, inner at about two-fifths from apex of discal cell.

Abdomen subcylindrical, compressed in front of the hypopygium, which is rather large, fifth tergite not keeled, with two or three long apical central bristles and a series of six or more similar bristles along the edges below, fifth sternite ending in a pair of wide chitinous unhaired broadly rounded lobes, hypopygial forceps with dense short black hairs at bases and on inner sides apically.

Squamae and halteres brownish-yellow.

Habitat.—New Britain: Rabaul (F. H. Taylor). Holotype ♂.